



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/036,882	01/02/2002	Russell Reed	79377	5976
------------	------------	--------------	-------	------

23572	7590	12/17/2004
-------	------	------------

NAVAIRWD
COUNSEL GROUP (CODE K0000D)
1 ADMINISTRATION CIRCLE
CHINA LAKE, CA 93555-6100

EXAMINER

CROSS, LATOYA I

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/036,882	Applicant(s) REED ET AL. SO	
	Examiner LaToya I. Cross	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-26 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to Applicants' amendments filed on July 16, 2004.

Claims 1-6, 8-26 and 28 are pending.

Withdrawal of Rejections from Previous Office Action

- The obviousness rejection over Holland et al is withdrawn in view of Applicants' amendment to recite particular binders. Likewise, the rejection over Holland et al in view of Grzyll and the rejection further in view of Taylor, are withdrawn also.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 6, 8, 9 and 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,120,058 to Mangum et al.

Mangum et al teach a gas generating composition for air bag inflation. The gas generating composition comprises a nitrogen containing compound, an oxidizer and a binder. The nitrogen containing compound is taught as being those such as nitroguanadine and triamionoguanadinenitrate (col. 6, lines 38-50). The nitrogen-containing compound is present in the amount of up to 76% by weight (col. 6, lines 51-59). The oxidizer is taught as being

Art Unit: 1743

those such as alkali metal nitrates, alkali-earth metal nitrates, ammonium perchlorate, alkali metal perchlorate, alkali-earth metal perchlorate and ammonium nitrate (col. 6, line 65 – col. 7, line 8). The oxidizer is present in an amount of 1-40% by weight. The binder is taught as being those such as polyester elastomer, polyurethanes, and copolymers thereof (col. 7, lines 23-27). The binder is present in an amount of 8-22% by weight. Also, plasticizers are present, which may serve as binders. Mangum et al teach plasticizers such as glycidyl azide polymer in up to 12% by weight (col. 7, lines 56-67).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2, 10, 18, 21, 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangum et al in view of US patent 6,045,637 to Grzyll.

The disclosure of Mangum et al is described above. Mangum et al fails to teach the presence of flame inhibitor precursors.

Grzyll teaches fire suppressing gas generating compositions comprising fuel, oxidizer and binder. Additionally, Grzyll teaches flame retardant materials in the compositions. The preferred flame retardant materials or bromine containing materials, such as hexabromocyclodecane and decabromodiphenyl oxides. Grzyll teaches that these flame retardants are not only flame retardant themselves, but also their decomposition products provide flame retardancy properties. Thus, it would have been obvious, to one of ordinary skill in the art to incorporate flame inhibiting precursors into the compositions of Mangum et al to

Art Unit: 1743

impart good flame inhibiting properties to the gas generating compositions using inexpensive materials.

5. Claims 3, 4, 11, 12, 1, 20, 22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangum et al in view of Grzyll as applied to claims 2, 10, 18, 21, 23 and 28 above, and further in view of US Patent 5,467,715 to Taylor et al.

The disclosures of Mangum et al and Grzyll are described above. Neither Mangum et al nor Grzyll teaches powder pressing material or electrostatic charge suppressors.

Taylor et al teach a gas generating composition similar to that instantly claimed by Applicants in that the composition of Taylor et al comprises a high nitrogen content solid and an oxidizer. Taylor et al teaches that it is frequently desirable to pelletize the gas generating composition thus requiring the use of binders and pressing aids (col. 3, lines 31-33). As binders and pressing aids, Taylor et al teach components which are conventionally used in pelletizing gas generating compositions such as graphite and mica.

Thus, because Taylor et al teach the conventional use of graphite and mica for pelletizing gas generating compositions which comprise high nitrogen content solids and oxidizers, it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to incorporate mica and graphite into the gas generating compositions of Mangum et al with the expectation of resulting in a gas generating composition similar to that instantly claimed by Applicants.

Art Unit: 1743

Response to Arguments

6. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 571-272-1256.

The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lic


Jill Warden
Supervisory Patent Examiner
Technology Center 1700